## (19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 4 August 2005 (04.08.2005)

**PCT** 

## (10) International Publication Number WO 2005/070419 A1

(51) International Patent Classification<sup>7</sup>: A61K 31/415

(21) International Application Number:

PCT/US2005/001807

(22) International Filing Date: 20 January 2005 (20.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/537,864 21 January 2004 (21.01.2004) US

- (71) Applicants (for all designated States except US): COR-NELL RESEARCH FOUNDATION, INC. [US/US]; Cornell Business and Technology Park, 20 Thornwood Drive, Suite 105, Ithaca, NY 14850 (US). UNIVERSITY OF KENT [GB/GB]; Technology Transfer, Canterbury, Kent CT2 7NJ (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): BUCK, Jochen [US/US]; 4 Ferris Drive, Greenwich, CT 06870 (US). LEVIN, Lonny, R. [US/US]; 1161 York Avenue, Apt. 6D, New York, NY 10021 (US). MÜHLSCHLEGEL, Fritz, A. [DE/GB]; 4 Durnford Close, Canterbury, Kent, CT2 7RY (GB).
- (74) Agents: GOLDMAN, Michael, L. et al.; Nixon Peabody LLP, Clinton Square, P.O. Box 31051, Rochester, NY 14603-1051 (US).

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: CHEMICAL INHIBITORS OF SOLUBLE ADENYLYL CYCLASE (SAC)

(57) Abstract: The present invention relates to a method of treating a disorder mediated by soluble adenylyl cyclase in a subject. The method involves administering to a subject an effective amount of a compound disclosed herein that modulates soluble adenylyl cyclase, under conditions effective to treat the disorder mediated by soluble adenylyl cyclase. The present invention also relates to a method of treating a disorder mediated by soluble adenylyl cyclase in a subject, where the disorder is selected from the group consisting of learning or memory disorders, malaria, fungal infection, spinal cord injury, Alzheimer's disease, amyotrophic lateral sclerosis, and peripheral neuropathy. The method involves modulating soluble adenylyl cyclase in the subject. Another aspect of the present invention relates to a method of modulating soluble adenylyl cyclase. The method involves contacting eukaryotic cells with a compound that modulates soluble adenylyl cyclase, under conditions effective to modulate soluble adenylyl cyclase.

